



REVIEW OF SIGNIFICANT CHANGES IN THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL

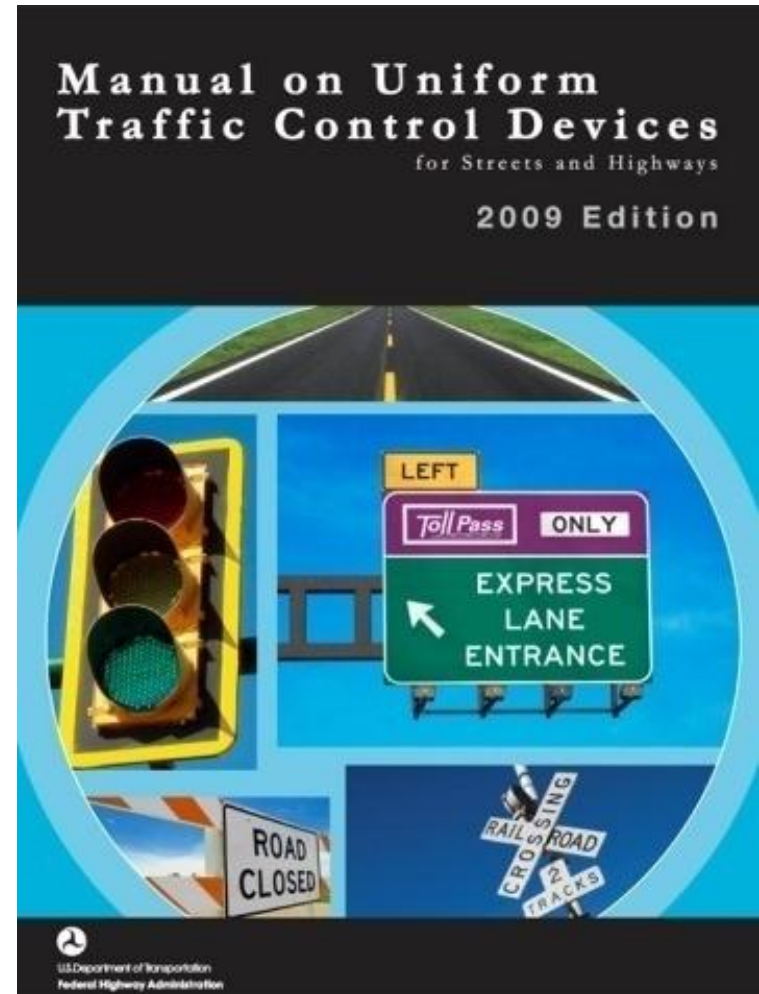
Virginia Asphalt Association Conference

Oct. 2, 2012

**VDOT Traffic Engineering Division
David Rush, Work Zone Safety Coordinator**

Manual on Uniform Traffic Control Devices (MUTCD)

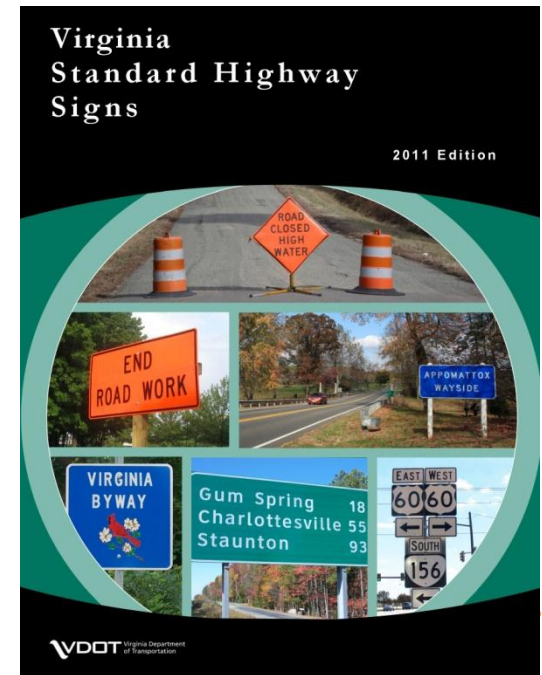
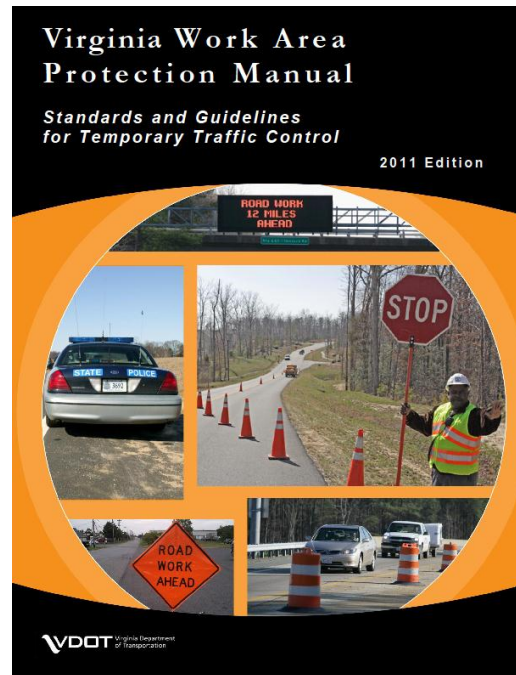
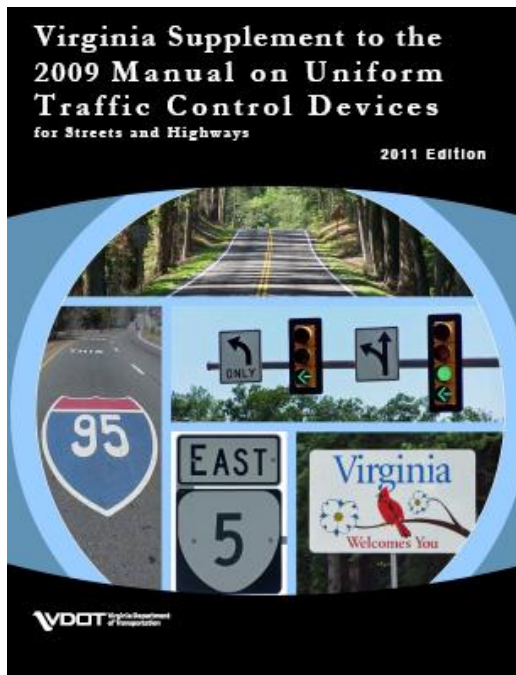
- Dec. 2009 – 2009 Edition published
- Jan 15, 2012 – Effective date for compliance as well as supplements by State and Municipal DOTs.



VA Supplement to the MUTCD

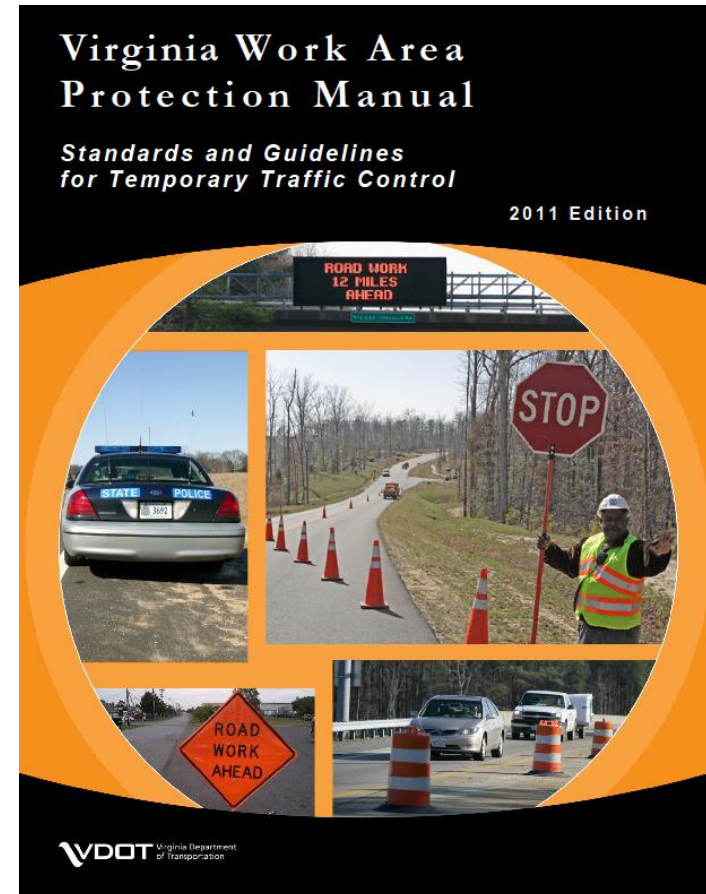
VDOT developed 3 Supplements which consist of:

- VA Supplement to the 2009 MUTCD
- VA Work Area Protection Manual (Part 6)
- VA Standard Highway Signs book



2011 VA WAPM Development

- **Incorporates many TE Memorandums such as**
 - WZ Speed Limit documentation
 - Slow Roll TTC
 - WZTC Training
- **FHWA/VDOT WZS Team Review Findings**
 - Pull-off area TTC
 - Expanded detour signing
- **Recommendations from field, industry, and municipality personnel**
 - Vehicle Warning Light
 - Easier to follow Appendix A
- **FHWA Final Rules**
 - WZS & Mobility
 - Positive Protection & Worker Safety

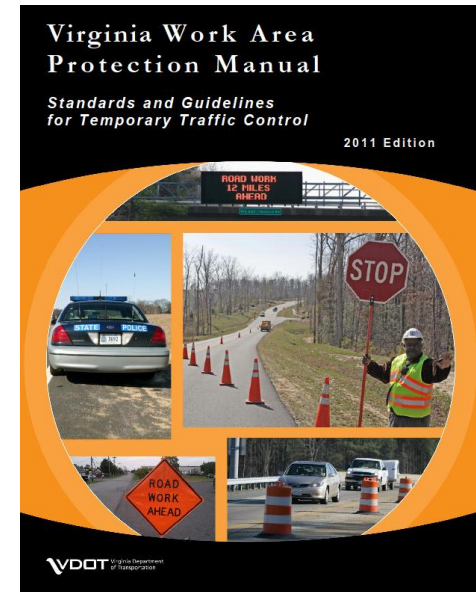


Received over 120 comments during the open review period.

2011 VA WAPM - Introduction

Changes/Additions

- Applies to all roads open to the public, including private roads
- Format the same as 2005 WAPM –
 - **Standards** (shall conditions, bold font)
 - *Guidance* (should conditions, italicized font)
 - Option (may conditions, underlined font)
 - Support (informational statements, standard font)
- Each paragraph is numbered for easier reference



04 The primary function of TTC is to provide for the reasonably safe and effective movement of road users through or around TTC zones while reasonably protecting road users, workers, responders to traffic incidents, and equipment.

05 Of equal importance to the public traveling through the TTC zone is the safety of workers performing the many varied tasks within the work space.

Chapter 6B – Fundamental Principles

Section 6B.01

Fundamental Principles of Temporary Traffic Control

- **References the 7 fundamental principles of TTC from the MUTCD**
 1. **Plans should be developed to provide safety for motorists, bicyclists, pedestrians, workers, law enforcement, and equipment in TTC zones.**
 2. **Inhibit road user movement as little as practical.**
 3. **Motorists, bicyclists, and pedestrians should be guided in a clear & positive manner through the TTC zone.**
 4. **Conduct routine day and night inspections of TTC to provide acceptable levels of operations.**
 5. **Maintain roadside safety during the life of the TTC zone (provide CZ's, reduce drop offs).**
 6. **Adequately train each person whose actions affect TTC safety.**
 7. **Maintain good public relations.**

Chapter 6B – Fundamental Principles

Section 6B.01

Fundamental Principles of Temporary Traffic Control

- **TTC should be reviewed on a periodic basis during nighttime conditions to ensure TTC devices meet the acceptable standards**
- **TTC reviews shall be performed after inclement weather**
- **References IIM-241/TED 351 for developing TMP's and TTCP's**



Chapter 6B – Fundamental Principles

Section 6B.01

Fundamental Principles of Temporary Traffic Control

- TCD's shall be removed as soon as practical when work is suspended 30 minutes or greater
- Advance warning signs and their portable supports may be stored behind barrier, guardrail or out of the construction clear zone (For Clear Zone distances, see Page A-4)
- Only individuals trained in WZTC practices shall supervise the selection, placement and maintenance of TTC devices



Chapter 6C – TTC ELEMENTS

Section 6C.04 Advance Warning Area

Updated Table 6C-1 Spacing Advance Warning Signs

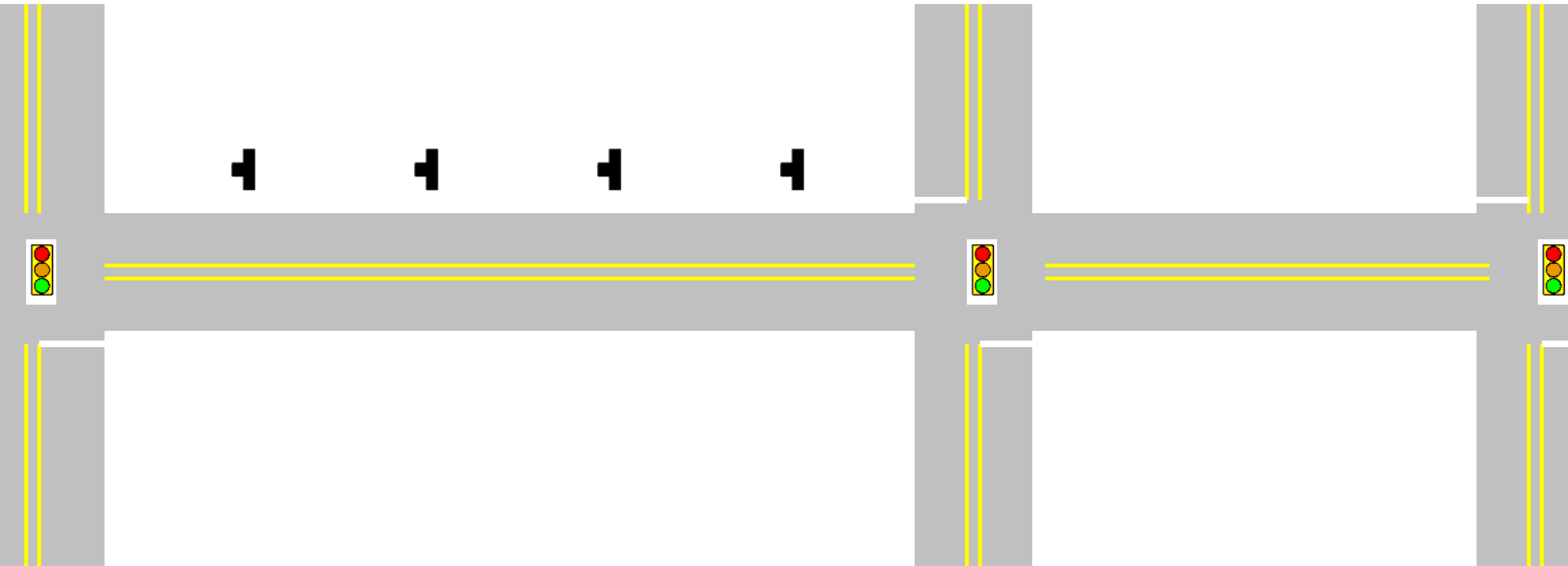
Road Type	Spacing (in feet)
Urban street with 25 mph or less posted speed	100' – 200'
Urban street with 30 to 40 mph posted speed	250' – 350'
* All Other Roadways with 45 mph or less posted speed	350' – 500'
All Other Roadways with greater than 45 mph posted speed	500' – 800'
Limited Access highways	1300' – 1500'

* Urban streets with greater than 40 mph posted speed limits fall into this category.

Chapter 6C – TTC ELEMENTS

Section 6C.04 Advance Warning Area

In urban conditions it is generally better to attempt to place all advance warning signs within a one block area versus spreading out over several blocks, provided that motorists have time to recognize and react to the signs.



Chapter 6C – TTC ELEMENTS

Section 6C.06 Buffer Space

- Updated spacing of the Longitudinal Buffer Space, Table 6C-2

Posted Speed Limit	Distance (Feet)
≤ 20	115 - 120
25	155 - 160
30	200 - 210
35	250 - 260
40	305 - 320
45	360 - 380
50	425 - 445
55	500 - 520
60	570 - 590
65	645 - 675
70	730 - 760
75	820 - 850

- Neither work activity nor storage or placement of equipment, vehicles (including law enforcement), or material shall occur within a buffer space

Chapter 6D - Pedestrian and Worker Safety

Section 6D.03

Worker Safety Considerations

- All workers should be trained on how to work next to motor vehicle traffic in a way that minimizes their vulnerability. Workers having specific TTC responsibilities should be trained in TTC techniques, device usage, and placement, TE Memo 345 WZTC Training Requirements

VIRGINIA DEPARTMENT OF TRANSPORTATION	
TRAFFIC ENGINEERING DIVISION	
MEMORANDUM	
GENERAL SUBJECT: Work Zone Safety	NUMBER: TE-345
SPECIFIC SUBJECT: Work Zone Traffic Control Training Procedures	DATE: Sept. 21, 2007
	SUPERSEDES:
LEARNING CENTER DIVISION APPROVAL: <i>Barbara Patterson</i>	TRAFFIC ENGINEERING DIVISION APPROVAL: <i>R. J. Kfoury</i>
DIRECTED TO: District Administrators Division Administrators	

Revised FHWA regulations provided in 23 CFR 630 Subpart J states that, "States shall require that personnel involved in the development, design, implementation, operation, inspection, and enforcement of work zone related transportation management and traffic control be trained, appropriate to the job decisions each individual is required to make."



Chapter 6D - Pedestrian and Worker Safety

Chapter 6E – Flagger Control

Section 6D.03 & 6E.02
Beginning July 1, 2012



WORKERS, FIRST RESPONDERS, & FLAGGERS shall wear high-visibility safety apparel that meets Performance Class 3 requirements of the ANSI/ISEA 107–2010

VDOT employees required to have a minimum of 10 sq. in. retroreflectivity on headwear. This is not a requirement for contractors

Chapter 6D - Pedestrian and Worker Safety

Chapter 6E – Flagger Control

Section 6D.03 (Worker) & 6E.02 (Flagger)

Beginning July 1, 2012

- Nighttime operations requires workers installing and removing TTC and Flaggers to wear Type E trousers in addition to their high-visibility safety apparel that meets Performance Class 3.
- Flaggers required to wear Type E trousers in addition to their high-visibility safety apparel meeting Performance Class 3 during other low light conditions such as inclement weather (fog, rain, sleet, snow, etc.)
- Defines nighttime work zones as operations which occur from 30 minutes before sunset until 30 minutes after sunrise.

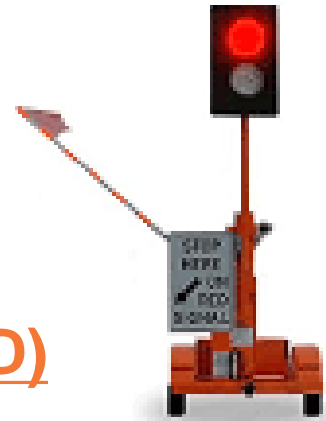


Chapter 6E – Flagger Control

NEW:

Section 6E.04

Automated Flagger Assistance Devices (AFAD)

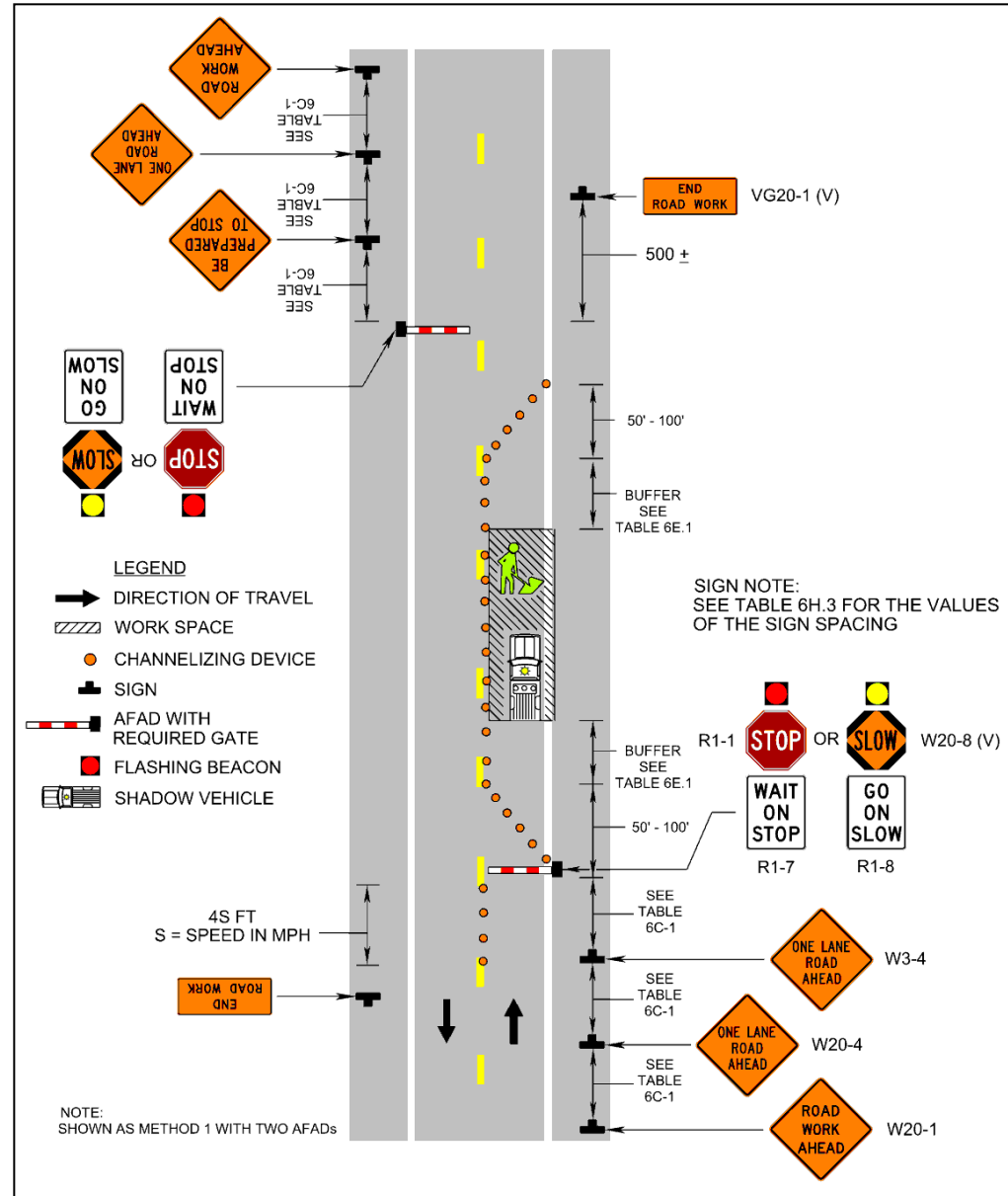


AFADs shall only be used when all of the following conditions are met:

- **Two-lane roadway closed to one lane of traffic;**
- **One lane of approaching traffic in the direction to be controlled;**
- **ADT is 12,000 or less vehicles or as directed by the RTE;**
- **Operator shall be a certified flagger and must be present to operate the units;**
- **Operator must have an unobstructed view of AFAD and approaching traffic;**
- **RTE approves multiple operators and distances greater than 800 feet.**

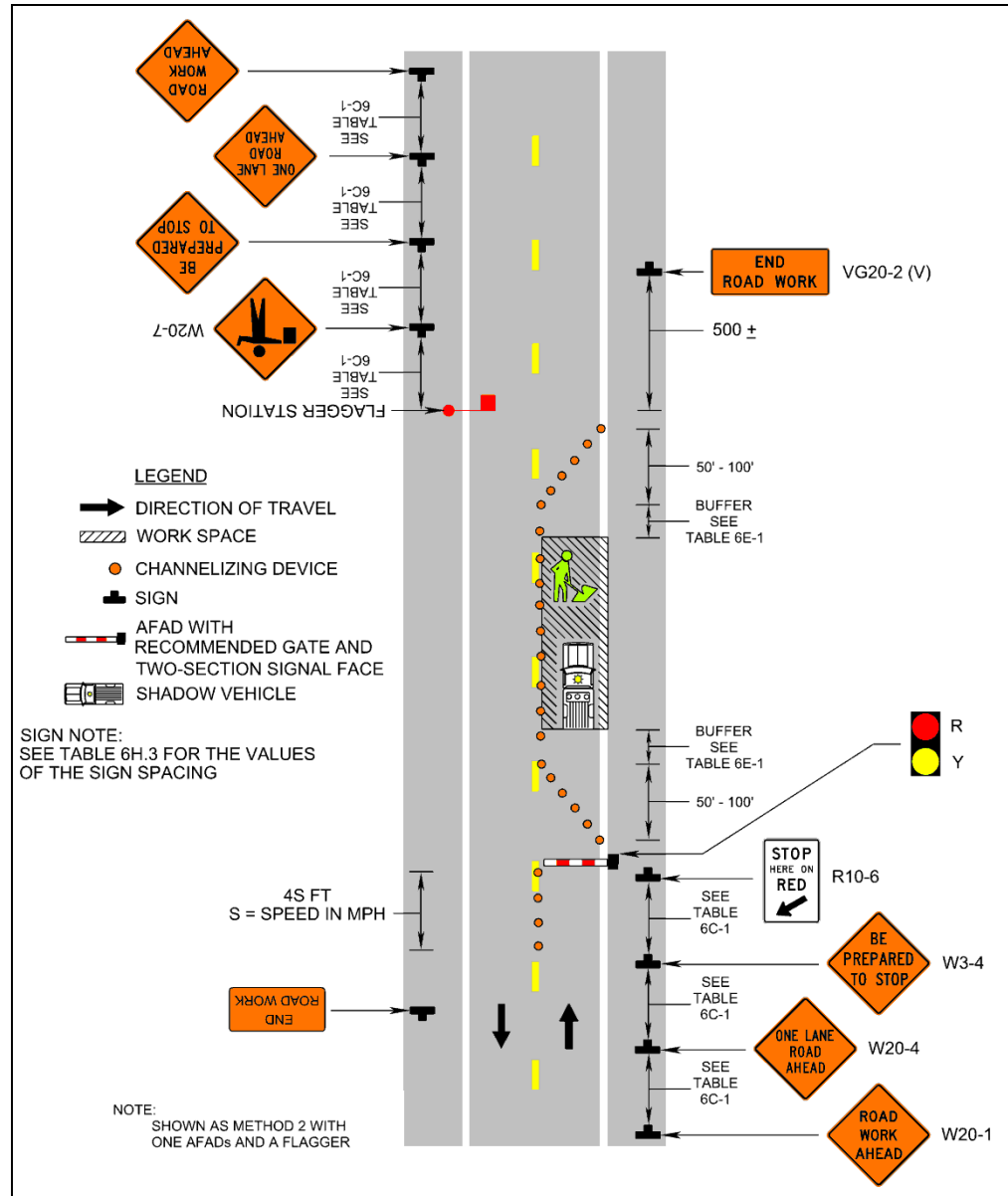
Chapter 6E – Flagger Control

NEW: Section 6E.05 Stop/Slow AFAD



Chapter 6E – Flagger Control

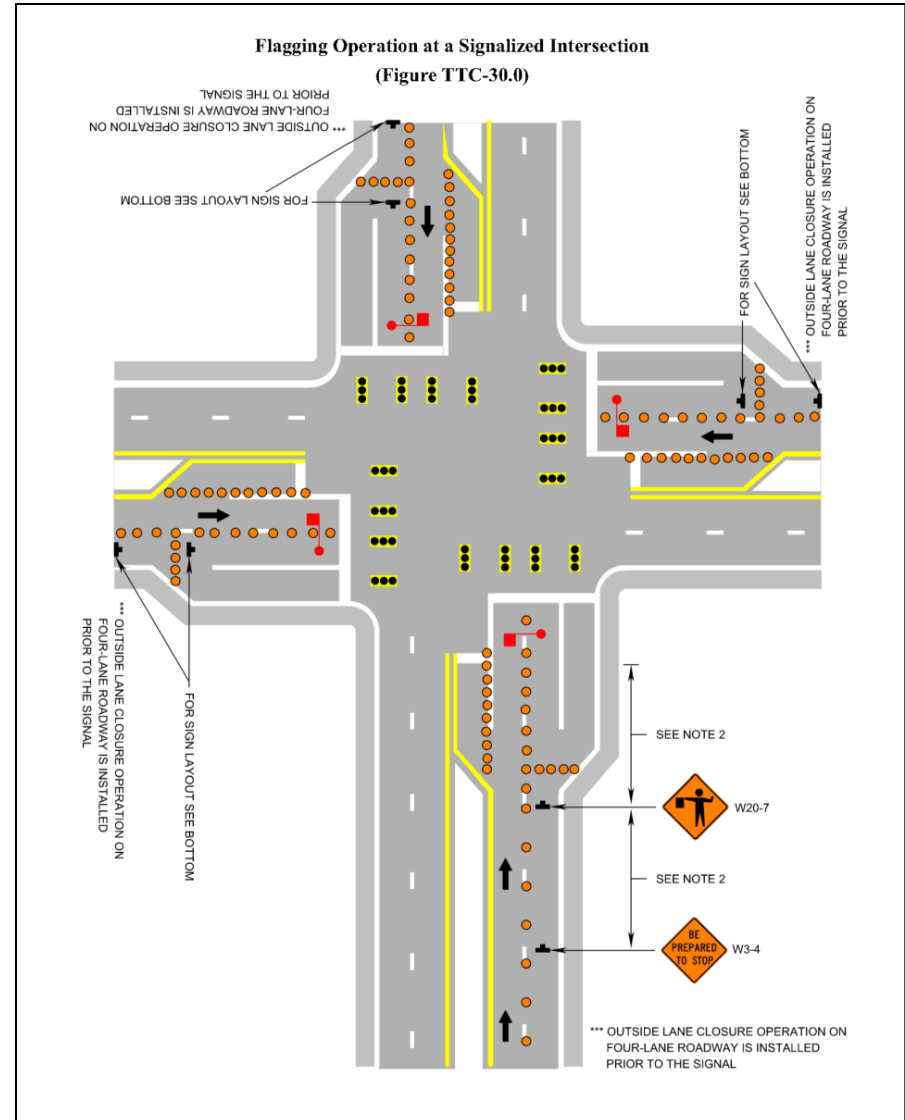
NEW: Section 6E.06 Red/Yellow Lens AFAD



Chapter 6E – Flagger Control

Section 6E.07 Flagger Procedures

- Only uniformed law enforcement officers are allowed to direct traffic through an operating traffic signal (see Section 46.2-834 of Highway Laws of Virginia)
- A flagger shall control only one lane of traffic approaching an intersection as shown in Figure TTC-30



Chapter 6E – Flagger Control

Section 6E.08 Flagger Station

- Flagger signs removed, covered, turned away when work is suspended 30 minutes or longer
- Illumination requirements and measurement to determine correct illumination (5 foot-candles or 50 lux)
- If glare from standard types of floodlight equipment cannot be eliminated, then consideration should be made for the use of non-glare lighting devices such as non-glare air-filled lighting devices, Section 6F.90



Chapter 6F – TTC Zone Devices

Section 6F.02 General Characteristics of Signs

- Sign fabrication requirements are found in MUTCD's “Standard Highway Sign & Marking Book” and the VA Standard Highway Sign book
- Roll-up signs on portable supports only – not allowed on posts
- Rigid Material for post-mounted signs
 - Aluminum 0.100-inch thickness
 - 0.4 inch thick corrugated polypropylene or polyethylene plastic material
 - 0.079 inch thick aluminum/plastic laminate material



Chapter 6F – TTC Zone Devices

Section 6F.02 General Characteristics of Signs

- Orange rows are VA specific signs
- Pink rows VA Incident Management signs
- White and grey rows MUTCD signs
- Example of VA sign designations; W21-V1
- Example of VA sign designation which modifies an MUTCD sign; W20-8 (V)

Table 6F-1, Temporary Traffic Control Zone Sign and Plaque Sizes (Sheet 4 of 5)

Sign or Plaque	Sign Designation	Section	* Non-Restricted Right-of-Way Roadway	*Restricted Right-of-Way Roadway	*Residential & Urban – < 500 ADT & ≤ 30 MPH
VEHICLE-MOUNTED SIGNS					
Line Painting Ahead – Center Lane Closed Road Line Painting Ahead – Left (X Left) Lane(s) Closed * – Right (X Right) Lane(s) Closed	W20-V5C, V5L, V5La, V5R, V5Ra	6F.34	84 x 36	84 x 36	84 x 36
Spraying Ahead – Left (Right) Shoulder Closed	W20-V6L, V6R	6F.34	84 x 36	84 x 36	84 x 36
Spraying Ahead – Left (Right) Lane Closed	W20-V7L, V7R	6F.34	84 x 36	84 x 36	84 x 36
Pre-Storm Treatment – Center Lane Closed Pre-Storm Treatment – Left (X Left) Lane(s) Closed * – Right (X Right) Lane(s) Closed	W20-V8C, V8L, V8La, V8R, V8Ra	6F.34	84 x 36	84 x 36	84 x 36
Pre-Storm Treatment	W20-V9	6F.34	48 x 18	48 x 18	48 x 18
Keep Back 100 FT	W20-V10	6F.34	18 x 18	18 x 18	18 x 18
Road Closed High Water	W20-V11	6F.24	48 x 48	36 x 36	48 x 48
Ramp Closed Ahead	W20-V12	6F.24	48 x 48	36 x 36	48 x 48
Center (Left) (Right) Turn Lane Closed Ahead	W20-V13C, V13L, V13R	6F.26	48 x 48	36 x 36	48 x 48
Emergency Scene Ahead	W20-V25	6F.27	48 x 48	36 x 36	48 x 48
Slow Moving Vehicle (Vehicle-Mounted Sign)	W21-4	6G.06	36 x 18	36 x 18	36 x 18
Shoulder Work	W21-5	6F.42	48 x 48	36 x 36	48 x 48
Left Shoulder Closed	W21-5aL, 5aR	6F.42	48 x 48	36 x 36	48 x 48
Left Shoulder Closed Ahead	W21-5bL, 5bR	6F.42	48 x 48	36 x 36	48 x 48
Utility Work Ahead	W21-7	6F.45	48 x 48	36 x 36	48 x 48
Mowing Ahead	W21-8	6F.22	48 x 48	36 x 36	48 x 48
Watch for Slow Moving Vehicles	W21-V1	6F.22	48 x 48	36 x 36	48 x 48
Road Work Next 2 Miles	W21-V2	6F.21	48 x 48	36 x 36	48 x 48
Mowing Next 2 Miles	W21-V3	6F.22	48 x 48	36 x 36	48 x 48
Line Painting Next 5 Miles	W21-V4	6F.22	48 x 48	36 x 36	48 x 48
Spraying Next 5 Miles	W21-V5	6F.22	48 x 48	36 x 36	48 x 48
Cleanup Crew Working	W21-V6	**2H.08	48 x 48	36 x 36	48 x 48
Litter Pick Up	W21-V7	6F.18	48 x 48	36 x 36	48 x 48
Survey Crew Ahead	W21-V8	6F.44	48 x 48	36 x 36	48 x 48
All Traffic Merge Left (Right)	W21-V9L, V9R	TTC-45	48 x 48	36 x 36	48 x 48
Slow	W21-V10	6F.38	48 x 48	36 x 36	48 x 48
Both Shoulders Closed	W21-V11	6F.42	48 x 48	36 x 36	48 x 48
Both Shoulders Closed Ahead	W21-V12	6F.42	48 x 48	36 x 36	48 x 48
Pull-Off Area	W21-V13	6F.43	48 x 48	36 x 36	48 x 48
Left (Right) Pull-Off Area	W21-V14L, V14R	6F.43	48 x 48	36 x 36	48 x 48
No Pull-Off Area	W21-V15	6F.43	48 x 48	36 x 36	48 x 48
Ramp Work Ahead	W21-V16	6F.31	48 x 48	36 x 36	48 x 48
Signal Work Ahead	W21-V17	6F.32	48 x 48	36 x 36	48 x 48
Blasting Zone Ahead	W22-1	6F.47	48 x 48	36 x 36	48 x 48
Turn Off 2-Way Radio and Cell Phone	W22-2	6F.48	42 x 36	42 x 36	42 x 36
End Blasting Zone	W22-3	6F.49	42 x 36	42 x 36	42 x 36
Slow Traffic Ahead	W23-1	6F.34	48 x 24	48 x 24	48 x 24
New Traffic Pattern Ahead	W23-2	6F.37	48 x 48	36 x 36	48 x 48

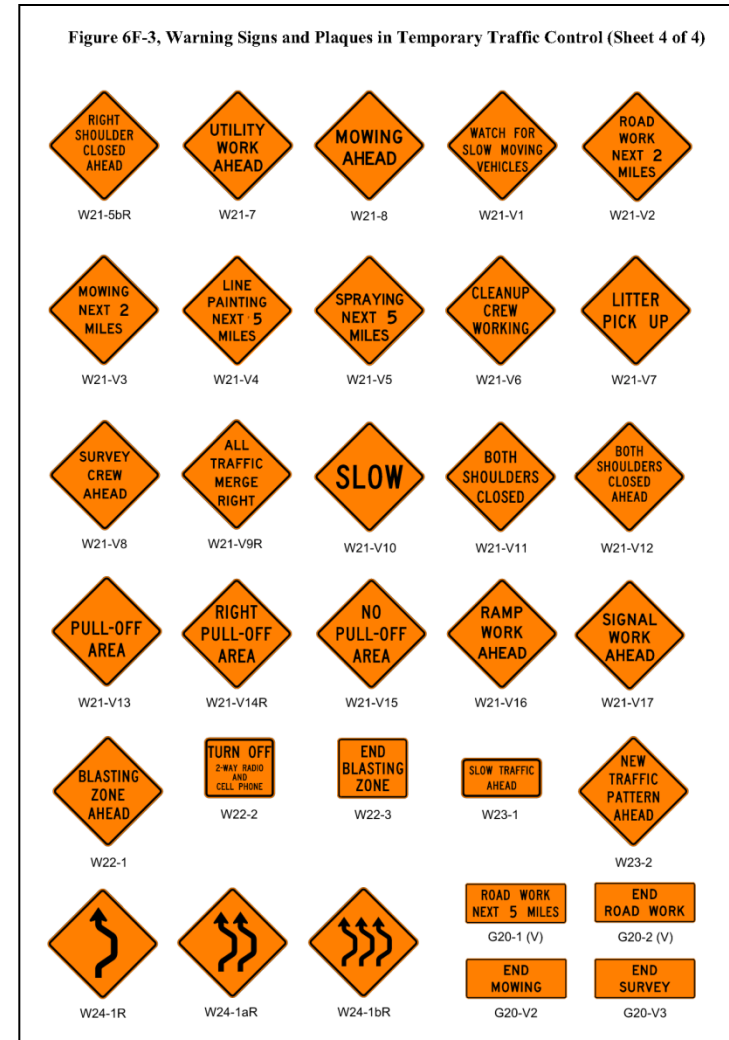
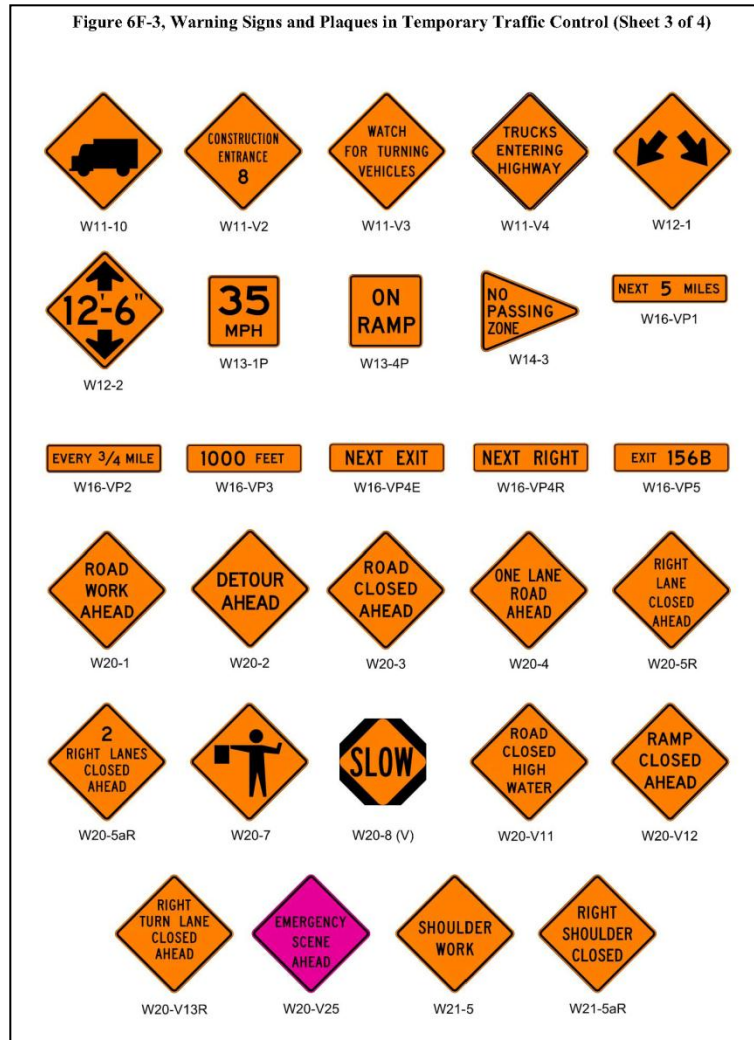
Dimensions are shown in inches and shown as width x height

* Sign sizes found in the Non-Restricted Right-of-Way Roadway column shall be used unless geometric condition prohibits their use; otherwise the other columns shall be used (see Section 6F-02 Paragraph 10).

** Sign information is found in the Virginia Supplement to the 2009 MUTCD.

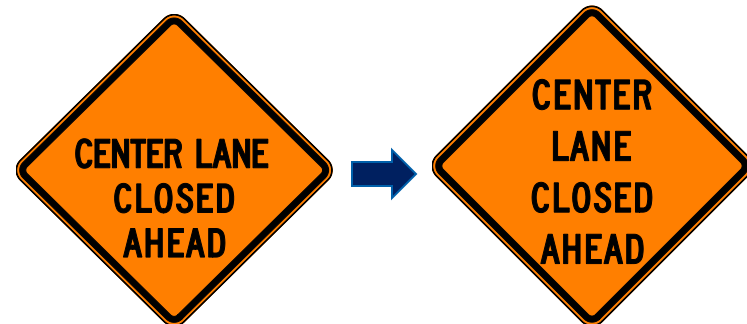
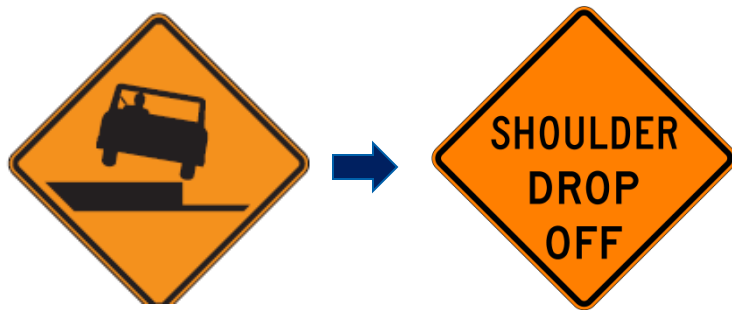
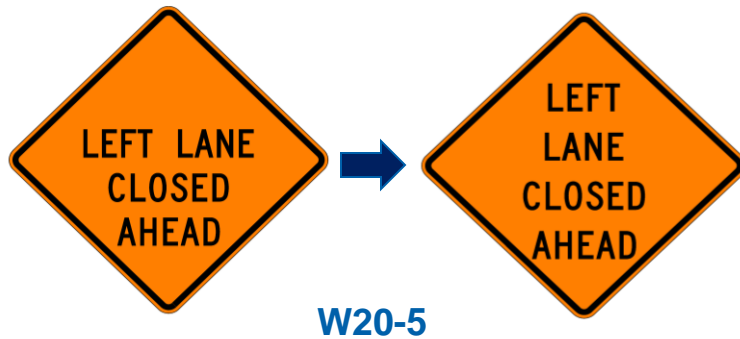
Chapter 6F – TTC Zone Devices

Figure 6F-3 shows MUTCD and Virginia Signs and Plaques



Chapter 6F – TTC Devices

Sign changes – the following signs will be changing on July 1, 2014:



W8-17

W8-V5

W20-5a

W9-3

Chapter 6F – TTC Zone Devices

Section 6F.03 Sign Placement

- Signs (except sidewalk closure signs operations) should not be used on portable sign supports for a duration of more than 3 consecutive days (72 consecutive hours)
- Sidewalk closure operations signs on portable sign stands shall use a sand bags on each leg weighting approximately 25 lbs
- Portable sign supports must support 20 sq. ft. sign
- The legs of portable sign supports should be as flush as possible to the ground or roadway for stability



Chapter 6F – TTC Zone Devices

Section 6F.04 Sign Maintenance

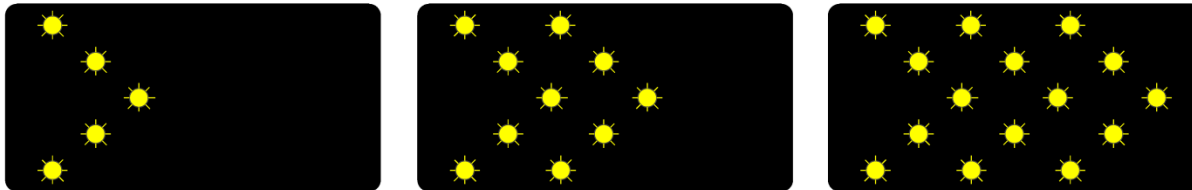
- Signs shall be reviewed after setup and periodically during each work shift
- Expands on covering signs when not in use with silt fence and plywood. No duct tape allowed on the face of a sign.
- Signs and their supports may be stored behind barrier, guardrail or outside the construction clear zone.



Chapter 6F – TTC Zone Devices

Section 6F.69 Arrow Boards

- Name changed from Arrow “Panel” to Arrow “Board”
- Allows Sequential Chevron arrow
- Does not allow Sequential arrow
- Shall be delineated with 4 channelizing devices



Sequential Chevron Arrow Display



Chapter 6F – TTC Zone Devices

Section 6F.92

Vehicle Warning Lights

- Changed from a size requirement to a performance requirement
 - Visible either day or night conditions a minimum of $\frac{1}{2}$ mile on Limited Access highways or a minimum of 1500 feet on all other roadways.
- Parked vehicles should not have their warning lights in operation unless the vehicle is a perceived hazard
- Prohibits the use of flashing white lights on construction and maintenance vehicles.



Chapter 6F – TTC Zone Devices

Section 6F.95

Crash Cushions

- Rear panel of a TMA shall have alternate 6 to 8 inch black and orange inverted stripes.
- Shall be used in accordance with manufacturer's specifications including weight of the support vehicle.
- The following distance of TMA's from a hazard has been increased from 50'-100' to 80'-120'.



Chapter 6G - Type of TTC Zone Activities

NEW Sections Added to Chapter 6G include:

Section 6G.13 Detours and Diversions

Section 6G.16 Work Within the Traveled Way at a Roundabout

Section 6G.24 Slow Roll Temporary Traffic Control Operations

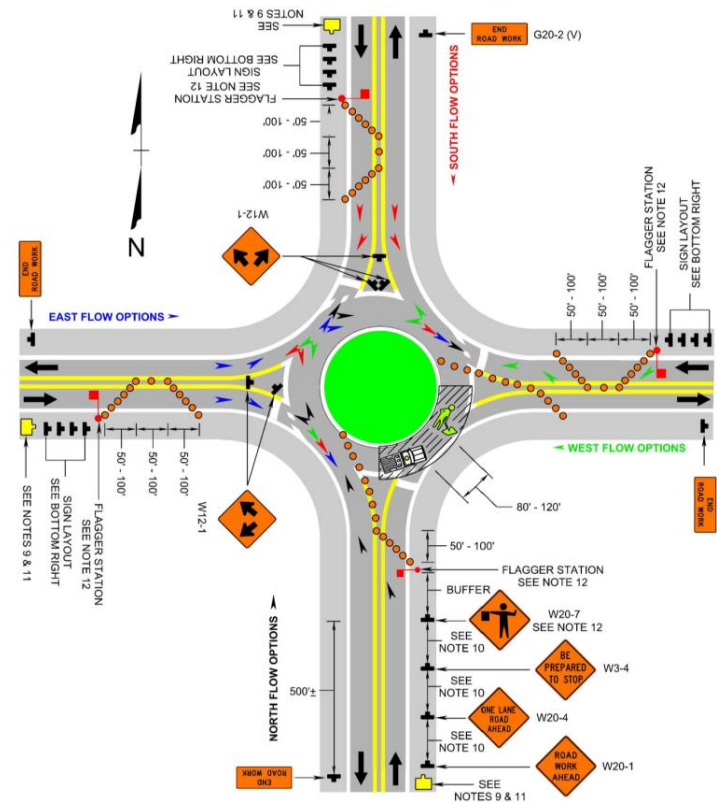
Section 6G.25 Installing/Removing TTC

Chapter 6G - Type of TTC Zone Activities

Section 6G.16 Work Within the Traveled Way at a Roundabout

- Section added to go along with new TTC layouts TTC-32, 33, and 34.
- Traffic control provided by flagger control in advanced of the roundabout.
- Accommodations for the turning radius of tractor trailer or other large vehicles should be considered when designing and installing the TTC.

Flagging Operation on a Single Lane Roundabout
(Figure TTC-31.0)



Chapter 6G - Type of TTC Zone Activities

NEW

Section 6G.27

Work Area Ingress/Egress Considerations



- Covers the need to plan for construction access to and from the work area.
- Requires the use of **WORK VEHICLE DO NOT FOLLOW** signs on the back of trucks hauling/delivering material



Chapter 6G - Type of TTC Zone Activities

NEW

Section 6G.27

Work Area Ingress/Egress Considerations



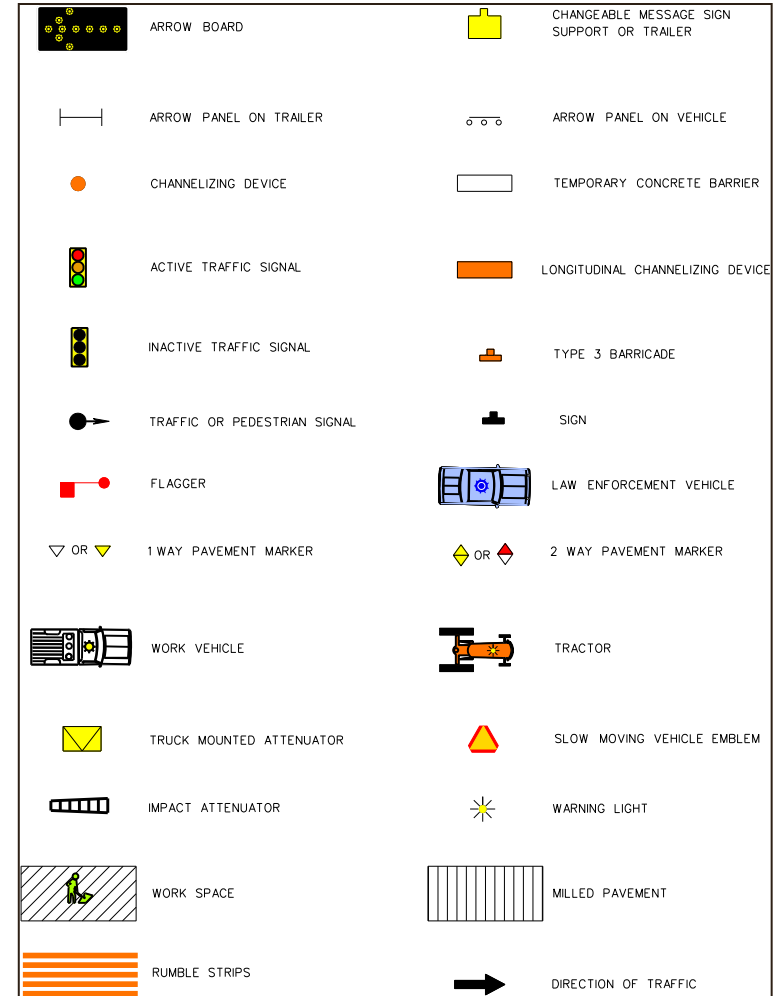
- Not required on the back of pickup trucks, SUV's, or vans which can enter/exit the WZ at higher speeds.
- Not required on one-way, two-lane operations since flaggers normally control the ingress and egress of work vehicles.



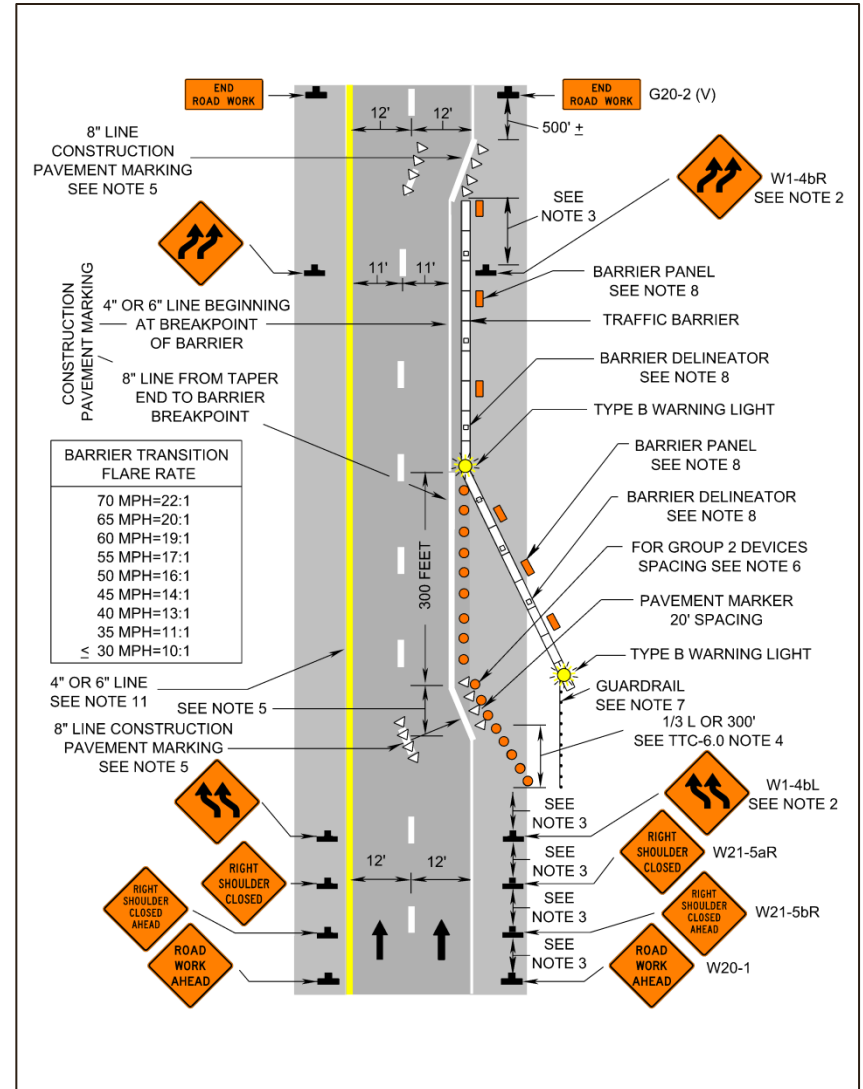
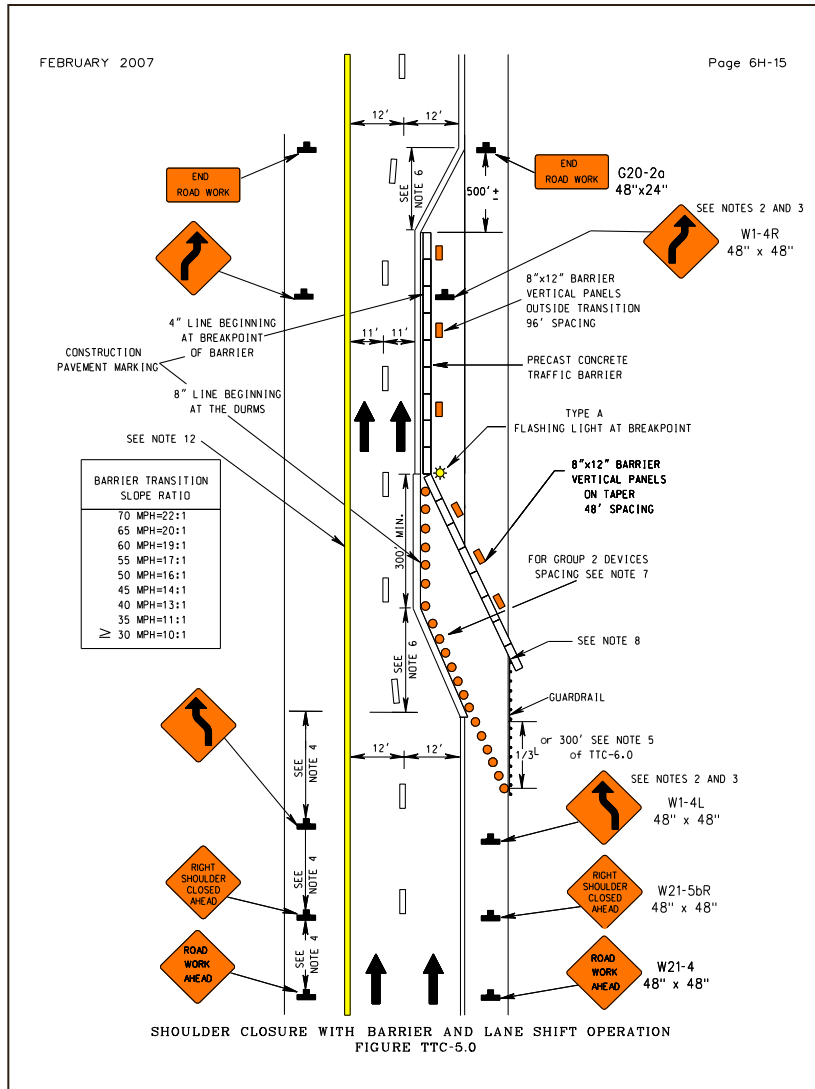
Chapter 6H – Typical Applications

Changes:

- Redesigned every TTC Figure
- Added Twenty-Three (23) New TTC Figures
- Added 70 MPH row to Taper Tables.
- Shadow or TMA vehicle shall be in a position 80'-120' in advance of workers or the work operations vehicle .



Chapter 6H – Typical Applications

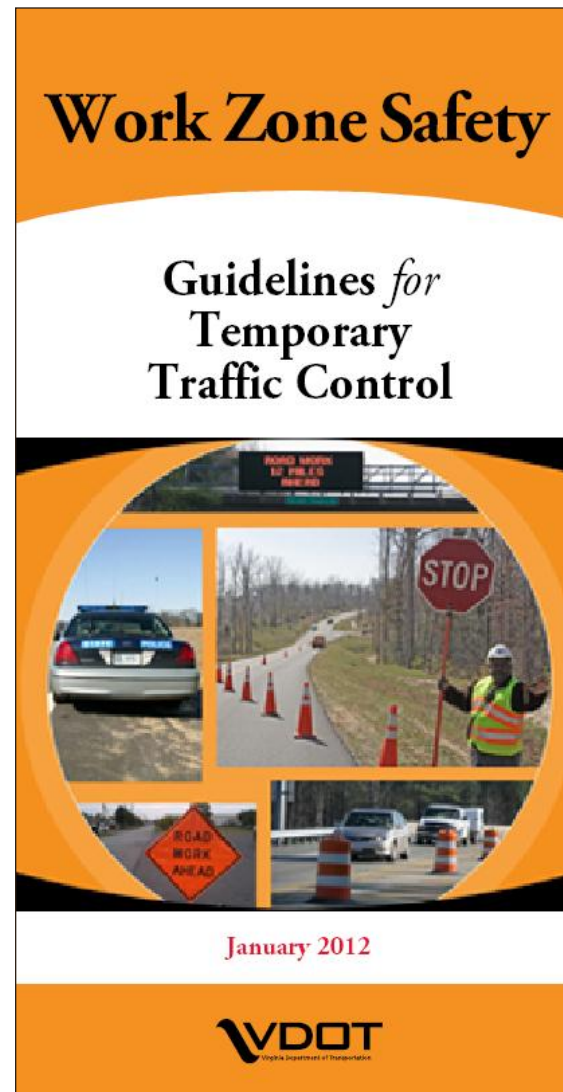


New TTC Figures include:

- Pull-Off Areas on Limited Access Highways
- Lane Closure Operations on a Two-Lane Roadway using Traffic Control Signals
- Lane Closures at Roundabouts
- Street Closure Operation with Detour
- Short Term and Long Term Roadway Detour
- Median Cross-Over Operation on a Multi-Lane Roadway
- End of Day Signing for Partial Width and Full Width Paving Operations on Multi-Lane Roadways and Two-Lane Roadways

2012 Pocket Guide

- Released with the Work Area Protection Manual
- Added references for the Manual for Assessing Safety Hardware (MASH)
- Updated terminology such as Arrow Board and TMA Vehicle distance ahead of the work crew
- Added sequential chevron to Flashing Arrow Boards
- Updated information on installing and removing lane closures
- Re-defined low-speed (30 mph)



The 2011 Edition of the Virginia Work Area Protection Manual Available On-Line At: www.virginiadot.org/business/trafficeng-WZS.asp

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Work Zone Safety

The Virginia Department of Transportation (VDOT) is committed to maintaining the safest possible work zones.

We do this by:

- Developing highway safety policies, standards and guidelines related to work zone safety
- Providing technical guidance, best practices and advice to work zone inquiries from internal and external customers
- Interpreting federal and state regulations and requirements

The Work Zone Safety staff is responsible for developing and issuing the Virginia Work Area Protection Manual, the Work Zone Safety Guidelines for Temporary Traffic Control pocket guide, and other work zone-related material.

We also manage the VDOT Work Zone Traffic Control Training Program and the Virginia Flagger Certification program as well as coordinate [Work Zone Awareness Week](#).

2011 Virginia Work Area Protection Manual

The 2011 Virginia Work Area Protection Manual (WAPM) has been adopted by the Commonwealth Transportation Board.

The 2011 WAPM is effective on and after Jan. 1, 2012, for VDOT crews, new maintenance projects, new traffic control devices, sign manufacturing, and renewal contracts.

The 2011 WAPM is also effective for all construction projects advertised on and after Jan. 1, 2012.

The 2011 WAPM can be accessed by clicking on the link below. To access a chapter, click on the chapter listing in the table of contents.

- [2011 Virginia Work Area Protection Manual](#)

The following document lists changes shown in the 2011 Work Area Protection Manual over the 2005 Work Area Protection Manual:

- [2011 Virginia Work Area Protection Manual Changes](#)

Below is a PowerPoint presentation listing the changes shown in the 2011 Work Area Protection Manual over the 2005 Work Area Protection Manual:

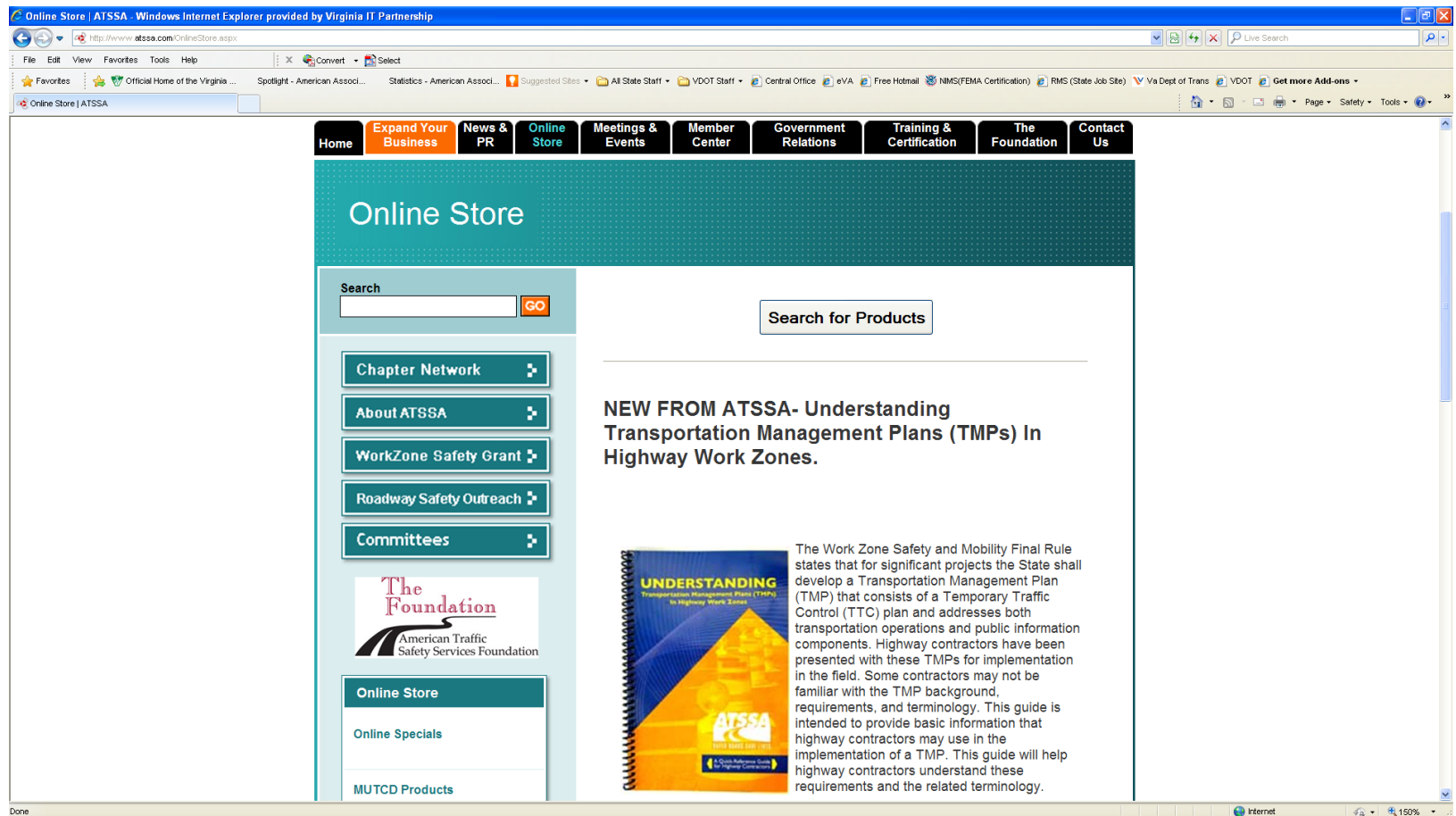
- [Review Of Significant Changes In The 2011 Virginia Work Area Protection Manual](#)

Based on the 2009 MUTCD and the new 2011 Virginia Work Area Protection Manual, VDOT has created the 2012 Work Zone Safety Guidelines for Temporary Traffic



2011 Virginia Work Area Protection Manual 2012 Guidelines for Temporary Traffic Control

Available On-Line from the American Traffic Safety Services Association: www.atssa.com




The screenshot shows the ATSSA Online Store website in a Windows Internet Explorer browser. The browser's address bar displays <http://www.atssa.com/OnlineStore.aspx>. The website features a navigation menu with links: Home, Expand Your Business, News & PR, Online Store, Meetings & Events, Member Center, Government Relations, Training & Certification, The Foundation, and Contact Us. The main content area is titled "Online Store" and includes a search bar with a "GO" button and a "Search for Products" button. On the left sidebar, there are links to "Chapter Network", "About ATSSA", "WorkZone Safety Grant", "Roadway Safety Outreach", and "Committees". Below these links is the logo for "The Foundation American Traffic Safety Services Foundation". The main content area also features a section titled "NEW FROM ATSSA- Understanding Transportation Management Plans (TMPs) In Highway Work Zones." which includes an image of a spiral-bound book titled "UNDERSTANDING Transportation Management Plans (TMPs) In Highway Work Zones" and a text block explaining the importance of TMPs for highway contractors. The book cover shows a yellow and blue design with the ATSSA logo. The text block states: "The Work Zone Safety and Mobility Final Rule states that for significant projects the State shall develop a Transportation Management Plan (TMP) that consists of a Temporary Traffic Control (TTC) plan and addresses both transportation operations and public information components. Highway contractors have been presented with these TMPs for implementation in the field. Some contractors may not be familiar with the TMP background, requirements, and terminology. This guide is intended to provide basic information that highway contractors may use in the implementation of a TMP. This guide will help highway contractors understand these requirements and the related terminology."

2011 Virginia Work Area Protection Manual

2012 Guidelines for Temporary Traffic Control

On-Line Order form at: www.atssa.com


**VDOT Work Zone Safety Material
Order Form**

PRODUCT	QUANTITY	BASE PRICE	TOTAL								
2011 Virginia Work Zone Area Protection Manual		\$27.00									
2012 Work Zone Safety Guidelines for Temporary Traffic Control Pocket Guide		\$8.00									
VDOT Flagger Certification Kit (includes a 2012 Work Zone Safety Guidelines for Temporary Traffic Control Pocket Guide, the Work Zone Safety Training DVD, printed material (handouts, tests), and one (1) dozen flagger certification cards)		\$15.00									
VDOT Work Zone Safety Training DVD		\$9.00									
Flagger Certification Cards (additional, sold separately)											
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>1-24 cards</td> <td>25-49 cards</td> <td>50-99 cards</td> <td>100+ cards</td> </tr> <tr> <td>\$0.50 each</td> <td>\$0.40 each</td> <td>\$0.30 each</td> <td>\$0.25 each</td> </tr> </table>	1-24 cards	25-49 cards	50-99 cards	100+ cards	\$0.50 each	\$0.40 each	\$0.30 each	\$0.25 each		refer to table	
1-24 cards	25-49 cards	50-99 cards	100+ cards								
\$0.50 each	\$0.40 each	\$0.30 each	\$0.25 each								

Name: _____

Agency/Company: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Phone: (_____) _____ Fax: (_____) _____

Email: _____

_____ Check enclosed Please charge my credit card: _____

Visa _____ Mastercard _____ American Express _____

_____ Purchase Order Attached (Public Agencies Only)

Card Number: _____

Exp. Date: _____ CSC Code _____

Authorized Signer _____


SUBTOTAL	\$	
20% Agency Discount**	\$	
Tax		
Shipping*	\$	
TOTAL	\$	

* Option: Processed orders may be picked up at ATSSA
Call 1-877-542-4537 to make advanced arrangements

Subtotal Amount	Ground	3-day select	2-day	Next day
\$0.00 - \$9.99	\$6.00	\$9.50	\$12.00	\$28.00
\$10.00 - \$24.99	\$7.50	\$12.00	\$15.50	\$33.00
\$25.00 - \$49.99	\$8.50	\$15.00	\$19.00	\$39.00
\$50.00 - \$74.99	\$10.50	\$17.00	\$23.00	\$44.50
\$75.00 - \$99.99	\$11.50	\$21.00	\$25.00	\$53.00
\$100.00 - \$199.99	\$15.50	\$27.00	\$37.00	\$65.00
\$200.00 - \$299.99	\$17.50	\$34.00	\$50.00	\$78.00
\$300.00 - \$399.99	\$21.50	\$42.00	\$62.00	\$90.00
\$400.00 - \$499.99	\$26.00	\$50.00	\$74.00	\$104.00
\$500.00 - \$599.99	\$29.50	\$58.50	\$85.50	\$120.00
\$600.00 - \$699.99	\$33.50	\$67.50	\$96.50	\$133.00
\$700.00 - \$799.99	\$36.00	\$75.00	\$107.50	\$150.00
\$800.00 - \$899.99	\$39.00	\$83.00	\$118.00	\$167.00
\$900.00 - \$999.99	\$42.50	\$92.00	\$131.00	\$188.00

**VDOT and other Commonwealth of Virginia agencies shall receive the materials at a 20% discounted price.

VDOTWZ



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REVIEW OF SIGNIFICANT CHANGES IN THE 2011 VIRGINIA WORK AREA PROTECTION MANUAL

Virginia Asphalt Association Conference

Oct. 2, 2012

VDOT Traffic Engineering Division

David Rush, Work Zone Safety Program Manager